

ABSTRACT

An optical fiber cable including a buffer tube wherein the optical unit is maintained in an axial center location of the buffer tube and protected from contact with an inner wall of the buffer tube. At least first and second gel layers are interposed
5 between the buffer tube and the optical unit, wherein the first gel layer surrounds the optical unit, the second gel layer surrounds the first gel layer, and the first and second gel layers have different rheological properties. The inner gel layer may have a yield stress and a viscosity which are lower than a yield stress and a viscosity of the outer gel layer. The lower yield stress and viscosity of the inner gel layer serves to maintain the
10 optical unit in an axial center position within the buffer tube and facilitates easy re-positioning of the optical unit to the axial center position when the buffer tube is flexed or bent. As a result, the optical unit may be maintained in a low stress state and stress-induced attenuation may be prevented.